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1/17/06
DATE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants: Sperry et al. Group Art Unit: 1772

Serial No.: 10/057,067 Examiner: Simone, Catherine

Filing Date: January 25, 2002 Docket No.: D-30259-01

Title: APPARATUS AND METHOD FOR FORMING INFLATED CHAMBERS

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APPEAL BRIEF UNDER 37 CFR § 41.37

Sir:

This Brief is being filed pursuant to a Notice of Appeal filed October 20, 2005 in the above-referenced patent application. Pursuant to 37 CFR §41.20(b)(2), please charge Deposit Account No. 07-1765 in the amount of $500.00 for filing this Brief.

Submitted herewith is a petition for a one-month extension of time.

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(1) Real Party in Interest

The real party in interest is Sealed Air Corporation (US), assignee of the above-referenced patent application.

(2) Related Appeals and Interferences

There are no other appeals, interferences or judicial proceedings known to Appellant, Appellant's legal representative, or Assignee which may be related to, directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal. Appellants note, however, that the De Luca reference (U.S. Pat. No. 6,410,119), which is one of the references relied upon in making the final rejection, is currently under Re-Examination (Control No. 90/007,689).

(3) Status of Claims

The claims on appeal are pending claims 1-10 and 33. A copy of these claims appears in the Appendix.

(4) Status of Amendments

No amendment was filed subsequent to the final rejection.

(5) Summary of the Claimed Subject Matter

The invention as described in the claims on appeal pertain to an inflatable web 10, as shown perhaps most clearly in FIG. 1. Referring to FIG. 1, there is shown the inflatable web 10 in accordance with the claimed invention, comprising two sheets 12 and 14 having respective inner surfaces 12a and 14a sealed to each other in a pattern defining a series of inflatable chambers 16 of predetermined length "L." Length L may be substantially the same for each of the chambers 16, with adjacent chambers being off-set from one another as shown in order to arrange the chambers in close proximity to one another. Sheets 12 and 14 are sealed to each other in a pattern of seals 18 that defines the inflatable chambers 16 such that each of the chambers has at least one change in width over their length L. That is, seals 18 may be patterned to provide in each chamber 16 a series of sections 20 of relatively large width connected by relatively narrow passageways 22. (See, page 4, lines 14-26 of Appellants' specification.)

Seals 18 are also patterned to provide inflation ports 24, which are located at proximal end 26 of each of the inflatable chambers 16 in order to provide access to each chamber so that the chambers may be inflated. Opposite to the proximal end 26 of each chamber is a closed distal end 28. As shown, seals 18 at proximal end 26 are intermittent, with inflation ports 24 being formed therebetween. Preferably, inflation ports 24 are narrower in width than the inflatable sections 20 of relatively large width in order to minimize the size of the seal required to close off each chamber 16 after inflation thereof. (See, page 5, lines 5-13 of Appellants' specification.)

Inflatable web 10 further includes a pair of longitudinal flanges 30, which are formed by a portion of each of sheets 12 and 14 that extend beyond inflation ports 24 and intermittent seals 18. Thus, as shown in

FIG. 1, the flanges 30 have a pair of open, unsealed edges. In the embodiment shown in FIG.1, flanges 30 extend out equally beyond ports 24 and seals 18. The flanges accordingly have equivalent widths, shown as width "W." Flanges 30, in conjunction with ports 24 and seals 18, constitute an open inflation zone in web 10 that is advantageously configured to provide rapid and reliable inflation of chambers 16, particularly when used in conjunction with the method and apparatus disclosed in Appellants' specification.[1] (See, page 5, lines 14-21 of Appellants' specification.)

(6) Ground(s) of Rejection to be Reviewed on Appeal

Claims 1-10 and 33 stand rejected under 35 USC §103(a) as being unpatentable over De Luca et al. (US 6,410,119) in view of Jostler et al. (US 5,733,045).

[1] Claims directed to Appellants' method and apparatus are not on appeal, as they were deemed by the Examiner to relate to inventions that are distinct from Appellants' claimed inflatable web (see, Restriction Requirement mailed 4/4/2003). The method and apparatus, therefore, are not discussed herein.

(7) Argument

De Luca is directed "to a bubble wrap product in which [] individual inflatable strip[s] [are] defined between two laterally extending spaced apart peripheral seal lines which have an undulating configuration free of corner shapes which could concentrate stresses." (Col. 1, lines 23-27.)

De Luca further describes a pattern of seal lines that "form an inflation channel 31 which extends linearly along the length of web 11. In the particular embodiment of the packaging product 11 shown in FIG. 1, the inflation channel 31 extends along one side edge portion of the web 11. In the embodiment shown in FIG. 3, the inflation channel 31 extends linearly along a center portion of the web 11." (Col. 5, lines 44-51.)

At col. 5, lines 52-53, De Luca specifies that the "inflation channel 31 is defined between spaced apart seal lines 33 and 35."

The spaced apart seal lines 33 and 35 are further defined as follows:

> The seal line 33 is opened at spaced intervals to provide outlet ports 37. The outlet ports 37 function to permit a certain amount of the inflation pressure in the inflation channel 31 to be vented to atmosphere. (Col. 5, lines 54-57.)

> The seal line 35 is open at intervals to provide entrance ports 41. The entrance ports 41 permit pressurized air from the inflation channel 31 to enter the individual inflatable strips 21 for inflating the bubble chambers 23 and interconnecting passageways 25 (as described above). (Col. 6, lines 5-9.)

With continuing reference to FIG. 1, De Luca further describes how the web is inflated:

> An outlet bulb 57 of an inflation tube 59 is positioned within the inflation channel 31 and introduces air under pressure into the inflation channel for inflating the individual inflatable strips 21 by causing pressurized air to flow through the entrance ports 41. (Col. 6, lines 46-50.)
>
> The outlet ports 37 which are opposite certain ones of the entrance ports 41 serve to regulate the level of the air pressure within the inflation channel 31 (as described in more detail in co-pending application Ser. No. 09/638,843 incorporated by reference in this application). (Col. 6, lines 51-55.)
>
> [A] seal line 27 is formed across the entrance ports 41 as the strip of the film which contains the entrance ports 41 is passed through a sealing station. (Col. 6, lines 56-58.)
>
> A slitting station (not shown in FIG. 1 but described in application Ser. No. 09/638,843 pending) slits the inflation channel 31 to permit the web 11 to pass over the inflation tube 59 after the seal line 27 has been formed by the machine 19. (Col. 6, lines 63-67.)

Accordingly, De Luca teaches an inflatable web having an inflation channel that is bounded by first and second film sheets and defined between spaced-apart seal lines 33 and 35. As shown in FIG. 1, seal line 33 extends along one of the outermost longitudinal edges of the web while seal line 35 extends parallel to and inboard of seal line 33. Thus, the two seal lines 33 and 35 join the first and second film sheets of web 11 together such that inflation channel 31 is bounded by the first and second film sheets with a width (when uninflated) or diameter (when inflated) that is defined by the spacing between the pair of seal lines 33 and 35.

In contrast, the claimed inflatable web employs a pair of longitudinal flanges that are open, i.e., not sealed together, at an outermost longitudinal edge of the web. This feature was previously clarified by amending claim 1 to specify that the "flanges hav[e] a pair of open, unsealed edges." Since the flanges of the claimed web do not form a channel bounded on all sides as taught in De Luca, i.e., wherein the outer edge of the channel is sealed closed by seal line 33, slitting of the web is not required as part of the inflation process, as it is with the De Luca web (see, e.g., col. 6, lines 63-67 of De Luca).

In formulating the claim rejection, Jostler was cited in combination with De Luca in an attempt to cure the foregoing deficiency, i.e., the failure of De Luca to disclose flanges having a pair of open, unsealed edges. The Examiner argues that Jostler teaches that it is old and well-known in the analogous art to have flanges with a pair of open, unsealed edges, citing FIG. 1a, reference numeral 24a, b; also col. 2, lines 39-45, wherein Jostler teaches that each "respective wall 21a, b includes two opposing edge portions 24a, b which extend in the longitudinal direction of the web.... " The Examiner concludes that, because the open edges are provided "for the purpose of filling the pockets (chambers) with some material in order to inflate them ... it would have been obvious ... to have modified the longitudinal flanges in De Luca et al. to have a pair of open, unsealed edges as suggested by Jostler et al. in order to inflate the chambers...." (Part 4 of 12/14/2004 Office Action.)

In response, Appellants note that Jostler does not teach or suggest an inflatable web. Moreover, Appellants contend that, when the De Luca and Jostler references are read as whole, they are not properly combinable in the manner suggested by the Examiner, and thus do not establish a *prima facie* case of obviousness.

Jostler discloses a web 20 of flexible material, comprising a series of package-blanks/pockets 26 (col. 2, lines 8-18). The pockets are formed between opposing walls 21a, b. Each wall 21a, b includes two opposing edge portions 24a, b, which extend in the longitudinal direction of the web and include continuous retainer devices 43a, b for cooperation with mechanical devices 33a, b to supply material to be packaged into the pockets 26 (col. 2, lines 39-45). Such material is poured into the pockets 26 at a filling station 3, wherein the mechanical devices 33a, b hold the edge portions 24a, b apart via retainer devices 43a, b (col. 3, lines 30-36; see also FIG. 3, which is a top plan view of filling station 3, looking down the opened pockets 26).

Transverse slots 27 or transverse perforations 78 form separation means between each container (col. 2, lines 29-35). An important feature of Jostler's teaching is the inclusion of longitudinal slots 29, which extend from each transverse slot 27 and into each of the pockets 26 (paragraph bridging cols. 2-3; FIG. 1a). Alternatively, longitudinal perforations 79 may extend from each transverse perforation 78 and into each of the pockets 26 (*Id*; FIG. 1b). In either case, the function of the longitudinal slots 29 or perforations 79 is to allow the pockets 26 to be opened as widely as possible to facilitate the filling of such pockets in filling station 3 (col. 3, lines 43-51). As will be discussed in further detail below, not only is Jostler completely silent as to the desirability, or even the possibility, of using the disclosed web to make an inflated packaging cushion, but the longitudinal slots 29/perforations 79 render Jostler's web unsuitable as an inflatable web.

MPEP §2143 sets forth the basic criteria that must be met in order to establish a *prima facie* case of obviousness. **First**, there must be some suggestion or motivation in the prior art to combine the teachings of the

references. **Second**, there must be a reasonable expectation of success. An important proviso is that the suggestion to make the claimed combination must be found in the prior art, and not in the applicant's application. *MPEP §2143* (Eighth Edition, August 2001; Rev. 3, August 2005); *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991).

Turning to the first requirement of MPEP §2143, Jostler provides absolutely no teaching or suggestion of inflatable webs as disclosed in De Luca. More specifically, Jostler does not teach or suggest that pockets 26 are inflated with air to make inflatable cushioning material for protecting objects packaged within a shipping container as taught in De Luca (see, e.g., De Luca at col. 2, lines 37-46). Instead, Jostler teaches that pockets 26 are filled with material, such that the pockets themselves form the package (see, e.g., Jostler at claim 9). The inflated webs of De Luca, in contrast, are placed alongside the material to be packaged to protect such material within the package, but do not form the package itself as in Jostler (see, the above-referenced passage of De Luca at col. 2, lines 37-46). On this basis alone, it is clear that Jostler does not supply the requisite motivation to combine its teaching with that of De Luca in the manner suggested by the Examiner.

A complete review of Jostler's disclosure strongly reinforces the foregoing conclusion. Longitudinal slots/perforations 29, 79 extend into the pockets 26 to facilitate the filling thereof by allowing the distance between the upper edge portions 24a, b, which define the mouth or opening region of the pockets, to be increased (col. 3, lines 30-36 and 43-51). While this may be an advantageous feature of a web in which material is poured from above into the pockets thereof, such feature would make it difficult, if not impossible, to inflate such pockets.

In the first place, the presence of the longitudinal slots or perforations 29, 79 within the pockets 26 would permit the rapid escape

of air from the pockets, even after the initial closure of the pockets via the convergence of the retainer devices 43a, b (see, e.g., FIGS. 1a and 1b). This is because the slots/perforations 29, 79 are below the retainer devices 43a, b and extend into the pockets 26. Although upper strips 14a, b are eventually folded over and welded to the outer surfaces 21a, b of the web, which preferably causes the strips to cover the longitudinal slots/perforations 29, 79, this process is not complete until the pocket is moved from the filling station 3 to the second, folding station 4 and then the third, welding station 5 (col. 4, line 54 through col. 5, line 4). During the transition between the filling, folding, and welding stations, most, if not all, of any quantity of air injected into the pockets would escape via the longitudinal slots/perforations 29, 79. While some quantity of residual air could remain in the pockets after the strips have been folded over and then sealed, it is improbable that this would be sufficient to provide a cushioning function as required by De Luca, which shows the sealing station in extremely close proximity to the outlet bulb of the inflation tube (see, e.g., FIG. 1 of De Luca).

Secondly, Jostler's teaching of employing longitudinal slots or perforations to increase the size of the opening of each pocket to facilitate filling runs counter to that which is desired for inflation of a web, wherein the opening is generally as small as possible to reduce air leakage prior to sealing (see, e.g., FIGS. 1-2 of De Luca, wherein entrance ports 41 have a significantly narrower width than bubble chambers 23).

Accordingly, Jostler provides no suggestion whatsoever that the described web could be inflated for cushioning purposes. Moreover, when read as a whole, Jostler's disclosure clearly indicates that the described web would be unsuitable as an inflatable web for cushioning applications, which is required by De Luca. Thus, far from suggesting the use of open edges in an inflatable web such as De Luca's, Jostler

would have dis-incentivized one of ordinary skill in the art to apply any aspect of its teaching to inflatable web technology, such as that which is disclosed in De Luca.

With regard to the second requirement of MPEP §2143, it is well-established that a proposed modification of a prior art reference (1) cannot render the prior art unsatisfactory for its intended purpose, and (2) cannot change the principle of operation of a reference. *MPEP §2143.01* (Eighth Edition, August 2001; Rev. 3, August 2005); *In re Ratti*, 123 USPQ 349 (CCPA 1959); *In re Gordon*, 221 USPQ 1125 (Fed. Cir. 1984); *In re Fritch*, 23 USPQ2d 1780 (Fed. Cir. 1992); *In re Haruna*, 58 USPQ2d 1517 (Fed. Cir. 2001).

In the instant case, the proposed modification of De Luca based on Jostler would contravene both of the foregoing principles.

At col. 5, lines 52-58, De Luca specifies that the

> inflation channel 31 is defined between spaced apart seal lines 33 and 35.
>
> The seal line 33 is opened at spaced intervals to provide outlet ports 37. The outlet ports 37 function to permit a certain amount of the inflation pressure in the inflation channel 31 to be vented to atmosphere.

As explained at col. 6, lines 51-55,

> [t]he outlet ports 37 ... serve to regulate the level of the air pressure within the inflation channel 31 (as described in more detail in co-pending application Ser. No. 09/638,843 incorporated by reference in this application).

In addition to regulating the level of air pressure within the inflation channel, the outlet ports 37 also facilitate accurate position sensing of the individual inflatable strips 21 by sensing escaping air from the outlet ports via a pressure transducer (paragraph bridging cols. 5-6).

If De Luca's inflation channel were modified by changing the enclosed inflation channel into a pair of flanges having open, unsealed edges as proposed by the Examiner, seal line 33 at the outermost edge of inflation channel 31 would have to be removed, thereby eliminating the outlet ports 37 (see De Luca, FIGS. 1 and 2). Such a modification would render the De Luca web unsatisfactory for its intended purpose because the outlet ports 37 would no longer be present "to regulate the level of the air pressure within the inflation channel 31" (col. 6, lines 51-55), or to allow escaping air from the outlet ports to be sensed by a pressure transducer (paragraph bridging cols. 5-6).

Moreover, converting the enclosed inflation channel 31 to a pair of unsealed flanges would completely change the principle of operation of the De Luca invention. As explained hereinabove, De Luca inflates each of the inflatable strips 21 indirectly by first inflating the inflation channel 31 with pressurized air. The inflated channel then directs the pressurized air into the entrance ports 41 of each of the inflatable strips (col. 6, lines 5-10). Col. 6, lines 45-50 further explains that

> [a]n outlet bulb 57 of an inflation tube 59 is positioned within the inflation channel 31 and introduces air under pressure into the inflation channel for inflating the individual inflatable strips 21 by causing pressurized air to flow through the entrance ports 41.

If De Luca's inflation channel were modified by changing the enclosed inflation channel into a pair of flanges having open, unsealed edges as proposed, the resultant flange-edge would no longer be capable of maintaining itself in an inflated state to direct pressurized air into the inflatable strips 21, thereby radically changing De Luca's principle of operation. As was the case in *In re Ratti*, the "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [De Luca] as well as a change in the basic principle

under which the [De Luca] construction was designed to operate." 123 USPQ at 352.

Moreover, neither De Luca nor Jostler contains any information to explain how such a transformed web could be inflated. The proposed combination with Jostler, therefore, would render De Luca inoperative.

Accordingly, the combined teachings of the De Luca and Jostler references alone, i.e., without being viewed through the prism of Appellants' application, would have provided the skilled artisan with no expectation whatsoever that De Luca as modified by Jostler would be successful. Such combination, therefore, does not establish a *prima facie* case of obviousness against the claims on appeal.

In the Final Office Action, the Examiner attempts to defend the De Luca/Jostler combination by arguing that

> Jostler was merely cited for suggesting that is old and well-known in the art to have longitudinal flanges having a pair of open, unsealed edges [ ] and that it would have been obvious ... to have modified the longitudinal flanges in De Luca to have a pair of open, unsealed edges as suggested by Jostler in order to fill the pockets (chambers) with some material. One skilled in the art would clearly <u>be able to modify</u> the longitudinal flanges in De Luca to have a pair of open, unsealed edges in order to inflate the chambers, if so desired. (7/18/2005 Office Action at paragraph 2; emphasis added.)

Arguing that "[o]ne skilled in the art would clearly <u>be able to modify</u> the longitudinal flanges in De Luca..." is precisely the type of unfounded, hindsight-based speculation proscribed by MPEP §2143. Part III of MPEP §2143.01, for instance, specifically states that "[t]he mere fact that references <u>can</u> be combined or modified does not render

the resultant combination obvious unless the prior art also suggests the desirability of the combination (emphasis in original)." *In re Mills*, 16 USPQ2d 1430 (Fed. Cir. 1990); *In re Fritch*, 23 USPQ2d 1780 (Fed. Cir. 1992). There is absolutely nothing in either the De Luca or Jostler references to suggest the desirability of their combination as proposed. This is particularly true in view of the critical differences between the two references as described above.

Moreover, the foregoing argument provides a clear illustration that the Examiner is not reading the De Luca and Jostler references as a whole, as required by MPEP §2141.02 (Eighth Edition, August 2001; Rev. 3, August 2005; see Part VI) ("A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention."); *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 220 USPQ 303 (Fed. Cir. 1983); *EWP Corp. V. Reliance Universal, Inc.*, 225 USPQ 20 (Fed. Cir. 1985); *In re Wesslau*, 147 USPQ 391, 393 (CCPA 1965) ("It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art.").

In the instant case, the Examiner focuses only on the open, initially unsealed edges of Jostler without fully considering the context in which such edges are disclosed, namely, in a web designed specifically to allow material to be poured from above into the pockets thereof, but not as an inflatable web that may be inflated for cushioning applications, as required by De Luca. Thus, a skilled artisan would not have looked to Jostler for information pertaining to the modification of an inflatable web, such as De Luca's. The Examiner's myopic focus on only the open edges

of Jostler also ignores the fact that the proposed modification of De Luca based on Jostler would render the De Luca web unsatisfactory for its intended purpose, would radically change De Luca's principle of operation, and would render the De Luca invention inoperable.

Accordingly, when the De Luca and Jostler references are read as a whole and without resort to hindsight reconstruction based on Applicants' disclosure, it is clear that the proposed combination thereof lacks both a motivational basis and an expectation of success. Such combination, therefore, does not constitute a *prima facie* case of obviousness against the presently claimed invention.

Conclusion

Appellants respectfully submit that, for all of the foregoing reasons, claims 1-10 and 33 are patentable over the art of record. The rejection of those claims should therefore be reversed and the claims should be allowed.

The undersigned may be reached at (864) 433-2333.

Respectfully submitted,

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(8) Claims Appendix

1. An inflatable web comprising:

a) two sheets having inner surfaces sealed to each other in a pattern defining a series of inflatable chambers of predetermined length, each of the chambers having at least one change in width over their length;

b) an inflation port located at a proximal end of each chamber, said inflation ports being formed by intermittent seals between said sheets; and

c) longitudinal flanges formed by a portion of each of said sheets that extend beyond said inflation ports and intermittent seals, said flanges having a pair of open, unsealed edges.

2. The inflatable web of claim 1, wherein said chambers comprise at least two inflatable sections of relatively large width connected by relatively narrow inflatable passageways.

3. The inflatable web of claim 2, wherein said inflation ports are narrower in width than the inflatable sections of relatively large width.

4. The inflatable web of claim 1, wherein each of said sheets comprises a heat-sealable thermoplastic polymer on its inner surface.

5. The inflatable web of claim 2, wherein the sections of relatively large width are circular and capable of forming essentially spherical or hemispherical bubbles when inflated.

6. The inflatable web of claim 1, wherein said pattern defining the inflatable chambers form uninflatable planar regions between the inflatable chambers.

7. The inflatable web of claim 1, wherein said flanges have a width of at least ¼ inch.

8. The inflatable web of claim 1, wherein said flanges are substantially equal in width.

9. The inflatable web of claim 1, wherein each of said inflatable chambers has a closed distal end opposite from the proximal end of each chamber.

10. The inflatable web of claim 1, wherein said inflation ports comprise inner surfaces that are heat sealable to one another.

33. The inflatable web of claim 1, further including one or more lines of weakness that allow sections of said web to be removed.

(9) Evidence Appendix

No evidence described in 37 CFR §41.37(ix) was submitted by Appellant or entered by the Examiner.

(10) Related Proceedings Appendix

There are no other appeals, interferences or judicial proceedings known to Appellant, Appellant's legal representative, or Assignee which may be related to, directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.